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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/594,387

10/17/2006

Akira Mizuno

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11/30/2009

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EXAMINER

MCKANE, ELIZABETH L

ART UNIT

PAPER NUMBER

1797

MAIL DATE

DELIVERY MODE

11/30/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/594,387	<b>Applicant(s)</b> MIZUNO ET AL.	
	<b>Examiner</b> ELIZABETH L. MCKANE	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 27 August 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

***Claim Rejections - 35 USC § 103***

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-3, and 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi (JP 2002-360672) in view of Lin et al. (US 5,876,666).

With respect to claims 1, 3, 5, and 8, Takahashi teaches a sterilization apparatus including a chamber **3**, a vacuum pump **13**, a hydrogen peroxide supply unit **23**, an ozone supply unit **6**, and an exhaust unit **13**. The method of sterilization includes a decompression step using pump **13**, a hydrogen peroxide supply step following the decompression step, and an ozone supply step following the hydrogen peroxide supply step. See para [0016]-[0017]. After the objects have been sterilized, the chamber is exhausted. Ozone exhausted from the chamber is broken down by a catalyst **14**. Takahashi is silent with respect to generating a plasma within the chamber after the gas is exhausted.

Lin et al. discloses a method of sterilization within a chamber using hydrogen peroxide wherein a plasma generated by plasma source **50** is used at the end of the sterilization process and after evacuation of the chamber to "remove any residual hydrogen peroxide remaining on the sterilized articles." See col.10, lines 49-53; col.11, lines 32-48. It would have been obvious to one of ordinary skill in the art at the time of

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the invention to employ a plasma at the end of the sterilization process of Takahashi to assure removal of residual hydrogen peroxide from the articles.

With respect to claims 2 and 7, Takahashi teaches that the remaining ozone is 'destroyed'. The examiner submits that one of ordinary skill in the art would understand this term to mean that the ozone is broken down into oxygen and water, as this is how ozone decomposes.

As to claim 6, Takahashi is silent with respect to an antiscattering member. However, Lin et al. teaches an enclosure **10** and valve **14a** which would reduce scattering. It would have been obvious to use the sterilant supply means of Lin et al. as being sterilant supply means known in the art, where the results of doing so are not unexpected.

3. Claims 4 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Lin et al. as applied to claims 1 and 5 above, and further in view of Lin et al. (US 6,224,828).

Takahashi is silent with respect to circulating the sterilizing gas within the chamber. Lin et al. '828 teaches a method of sterilizing using a gaseous hydrogen peroxide sterilant wherein a pump **18** is employed to circulate the gas within the sterilization chamber. It would have been obvious to circulate the gas within the chamber of Takahashi in order to assure adequate contact of the sterilant with the objects therein.

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4. Claims 10 and 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Takahashi and Lin et al. as applied to claim 5 above, and further in view of Destrez et al. (US 2005/0109739).

Although Takahashi with Lin et al. teaches use of an electrode for the generation of plasma, the claimed electrode configuration is not disclosed. However, the claimed configuration is evidenced by Destrez et al. which teaches a plasma generator for a sterilization system. The generator includes a high-voltage electrode **26** connected to a high-voltage power source **20** and a low-voltage electrode **28** connected to ground **32**. See figure 3. Destrez et al. further teaches that the high-voltage electrode includes a plurality of point electrodes (see Figure 2). An insulator **30** is disclosed to be positioned between the high-voltage electrode and the low-voltage electrode - i.e. the high-voltage electrode is 'surrounded' by the insulator. See paragraph [0042]. It would have been obvious to employ the plasma generator of Destrez et al. for that of the combination since Destrez et al. teaches that the inventive plasma generator is an effective plasma generator giving reproducible effects over an extended period of time.

### ***Response to Arguments***

5. Applicant's arguments with respect to the claims have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to ELIZABETH L. MCKANE whose telephone number is (571)272-1275. The examiner can normally be reached on Mon-Fri; 5:30 a.m. - 2:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on 571-272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Elizabeth L McKane/  
Primary Examiner, Art Unit 1797

elm  
23 November 2009